

## CLAIMS

1. A mobile information apparatus comprising:

(A) a battery storage section including a rechargeable battery;

5 (B) a power supply section for converting electric power provided by one of an external power supply and said rechargeable battery to pre-determined direct current power, and charging said rechargeable battery with electric power provided by said external power supply;

10 (C) a schedule recording section for recording a user's schedule;

(D) a charge-state optimization planning section for determining a plan for the optimization of the charge state of said rechargeable battery according to said schedule; and

15 (E) a power-supply control section for establishing charge and discharge conditions based on said plan for the optimization, and, on the charge and discharge conditions, controlling the charge and discharge of said rechargeable battery by said power supply section.

20 2. A method of optimizing the charge state of a mobile information apparatus, comprising the steps of:

(A) recording a user's schedule;

(B) determining a plan for the optimization of the charge state of a rechargeable battery in a battery storage section

according to said schedule;

(C) establishing charge and discharge conditions based on said plan for the optimization; and

(D) controlling the charge and discharge of said rechargeable  
5 battery by a power supply section on said charge and discharge conditions.

3. A charge-state optimization program of causing the CPU of the mobile information apparatus according to claim 1 to function as said schedule recording section, said charge-state optimization  
10 planning section, and said power-supply control section.

4. A battery management server for providing a plan for an optimization to a battery-powered electrical apparatus comprising:

(a) a communications section for performing data communications with a network of the outside;

15 (b) a battery storage section including a rechargeable battery;

(c) a power supply section for converting electric power provided by one of an external power supply and said rechargeable battery to pre-determined direct current power, and charging said  
20 rechargeable battery by the electric power provided by said external power supply; and

(d) a power-supply control section for establishing charge and discharge conditions based on the plan for the optimization of the charge state of said rechargeable battery, and, on the charge

and discharge conditions, controlling the charge and discharge of said rechargeable battery by said power supply section;

said server comprises:

(A) a network interface for performing data communications  
5 with said network;

(B) a schedule recording section for recording a user's schedule;

(C) a device-list management section for monitoring a connection to said network by said battery-powered electrical  
10 apparatus, and creating and updating a list of said battery-powered electrical apparatuses connected to said network; and

(D) a charge-state optimization planning section for determining said plan for the optimization about each of said battery-powered electrical apparatuses included in said list, and  
15 informing each of said battery-powered electrical apparatuses of the plan for the optimization.

5. A method of optimizing a charge state of a battery-powered electrical apparatus by a battery management server, comprising the steps of:

20 (A) recording a user's schedule;

(B) monitoring a connection to a network by said battery-powered electrical apparatus; .

(C) creating and updating a list of said battery-powered electrical apparatuses connected to said network;

25 (D) for each of said battery-powered electrical apparatuses

included in said list, determining a plan for the optimization of the charge state of a rechargeable battery in a battery storage section by said battery management server according to said schedule;

5       (E) informing each of said battery-powered electrical apparatuses of said plan for the optimization by said battery management server through said network;

         (F) establishing charge and discharge conditions based on said plan for the optimization by each of said battery-powered  
10   electrical apparatuses; and

         (G) controlling the charge and discharge of said rechargeable battery by a power supply section on said charge and discharge conditions in each of said battery-powered electrical apparatuses.

6.       A charge-state optimization program for causing the CPU of  
15   the battery management server according to claim 4 to function as said schedule recording section, said device-list management section, and said charge-state optimization planning section.